

REMARKS

The Examiner, in paragraph 1 of the Office Action of August 3 2004, indicates as follows:

1. *The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.*

In response to the Examiner's indication in the paragraph 1 of the Office Action, the title has been amended with "Surveillance system for watching an object through an image". The amended title is thus believed to be clearly indicative of the invention to which the claims are directed.

The Examiner, in paragraph 2 of the Office Action of August 3 2004, further indicates as follows:

2. *Claims 1-8 are rejected under the 35 U.S.C. 102(b) as being anticipated by Ratz (US 5,982,420). Ratz teaches of a surveillance system comprising a camera unit for transforming an image into an image signal and outputting said image signal, and a display unit having a screen and operative to transform into an image said image signal outputted by said camera unit to display said image on said screen (Note: camera system generates a composite video signal containing image signals and has a display device, Column 1, Lines 66-67, Column 2, Lines 1-3); camera unit being operative to automatically chase an object as a chasing target and a display unit including marker displaying means for displaying a marker on said screen and chasing target determining means for determining said object spaced apart from said marker at a predetermined distance as said chasing target among said images displayed on said screen (Note: camera system including as automatic tracking device; a reference box for confining and locating the information defining the reselected portion as it is being viewed on the display, Column 2, Lines 4-14); marker is constituted by a pointer, and said chasing target determining means is operative to determine said object superimposed by pointer (Column 2, Lines 15-18); a joystick operative to output position signals and signal*

controlling means for receiving signals outputted by joystick to control camera and joystick having ability to control two states and setting means for setting states (Column 12, Lines 32-43); marker forms a plurality of screen areas on said screen and chasing target determining means is operative to determine said object positioned within one predetermined screen area on said screen (Column 13, Lines 28-35); marker displaying means is superimposed with object (Note: white lines on display screen along with rectangular box(i.e. marker), Column 12, Lines 4-17) chasing target determining means is operative to determine only one object as said chasing target to automatically be chased when said object is displayed on said screen (Column 12, Line 15-18), marker is made up of vertical and horizontal lines to form a plurality of areas (Note: crosshair defined by vertical and horizontal lines, running the length of the screen, Column 11, Line 58-63, Column 12, Lines 4-14).

In response to the Examiner's indication in the paragraph 2 of the Office Action, claims 1 and 4 have been amended, and claim 3 has been canceled.

The present invention defined in amended claim 1 is patentably distinguishable over each of the cited documents D1 (US 5,982,420A), D2 (US 6,437,819B1), D3 (US 5,552,823A), and D4 (US 6,392,692B1) for at least the following reasons.

The surveillance system is defined in amended claim 1 as comprising:

- (a) a camera unit for transforming an image indicative of the objects into an image signal and outputting the image signal;
- (b) a display unit having a screen and operative to transform the image signal outputted by the camera unit into an image to be displayed on the screen, the display unit including
 - (b1) marker displaying means for displaying a marker on the screen, and
 - (b2) chasing target determining means for selecting as a chasing target one object from among the objects displayed on the screen by determining whether or not the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target;
- (c) a joystick operative to be inclined at its desired angular positions to output position

signals respectively responsive to the desired angular positions;

(d) signal controlling means for receiving the position signals outputted by the joystick, the controlling means being operative to assume two controlling states consisting of a first controlling state to control the driving operation of the camera unit, and a second controlling state to control the movement of the marker on the screen in response to the position signals to ensure that the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target; and

(e) setting means for having the signal controlling means selectively assume the first and second controlling states.

From the elements (b1), (b2) and (d) each forming part of foregoing amended claim 1, it will be understood that the surveillance system can allow one of objects displayed on the screen to be selected as the chasing target by reason that the surveillance system comprises a display unit including marker displaying means for displaying a marker on the screen, and chasing target determining means for selecting as a chasing target one object from among the objects displayed on the screen by determining whether or not the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target. Additionally, the surveillance system can allow the marker to be positioned on the screen in predetermined relationship with the object to be selected as the chasing target from among the objects displayed on the screen by reason that the surveillance system further comprises a joystick operative to be inclined at its desired angular positions to output position signals respectively responsive to the desired angular positions; signal controlling means for receiving the position signals outputted by the joystick, the controlling means being operative to assume two controlling states consisting of a first controlling state to control the driving operation of the camera unit, and a second controlling state to control the movement of the marker on the screen in response to the position signals to ensure that the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target; and setting means for having the signal controlling means selectively assume the first and second controlling states. This leads to the fact that the surveillance system can allow an operator to indicate which one of the objects is to be chased by the camera unit. Accordingly, the surveillance

system can allow the camera unit to automatically chase the object selected from among the objects to have the display unit display the object as the chasing target.

The cited document D1, on the other hand, discloses an autotracking device which comprises: means for receiving and normalizing the composite video signals to a predetermined level; means for extracting a preselected portion of the composite video signals so as to isolate object information thereof, the information of the preselected portion having a transition rate that exceeds a predetermined value; means for detecting the transitions of the preselected portion and separating one transition from another; means for comparing the separated transitions against a reference and generating a corresponding output signal when each of the transitions exceeds the reference; means for comparing the corresponding output signals against each other to determine the dominant transition therebetween; means for digitizing the dominant transition value into digital data serving as target data; means for extracting horizontal and vertical synchronizing signals from the normalized composite video signals; means for digitizing the extracted horizontal and vertical synchronizing signals; counter means having a preloaded quantity and responsive to the digitized horizontal and vertical synchronizing signals, the counter means being synchronized to the display device, the counter means providing a fixed pattern corresponding to the preloaded quantity, the fixed pattern being displayed in the central region of the display device; and processor means for receiving the target data and providing first and second sets of signals with the first set of signals being applied to the counter means to cause the target data to be displayed in correspondence with the fixed pattern and the second set of signals serving as the steering signals to cause the camera to track the object.

The marker displaying means of the display unit of the surveillance system defined in amended claim 1 displays a marker on the screen, while the counter means of the autotracking device disclosed in the cited document D1 provides a fixed pattern corresponding to the preloaded quantity, the fixed pattern being displayed in the central region of the display device. The controlling means of the surveillance system defined in amended claim 1 is operative to assume two controlling states consisting of a first controlling state to control the driving operation of the camera unit, and a second

controlling state to control the movement of the marker on the screen in response to the position signals to ensure that the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target, while the processor means receives the target data and provides first and second sets of signals with the first set of signals being applied to the counter means to cause the target data to be displayed in correspondence with the fixed pattern and the second set of signals serving as the steering signals to cause the camera to track the object. In the autotracking device disclosed in the cited document D1, the movement of the marker is not controlled by the controlling means when the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target.

The cited document D1, therefore, fails to disclose a surveillance system which comprises a camera unit for transforming an image indicative of the objects into an image signal and outputting the image signal; a display unit having a screen and operative to transform the image signal outputted by the camera unit into an image to be displayed on the screen, the display unit including marker displaying means for displaying a marker on the screen, and chasing target determining means for selecting as a chasing target one object from among the objects displayed on the screen by determining whether or not the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target; a joystick operative to be inclined at its desired angular positions to output position signals respectively responsive to the desired angular positions; signal controlling means for receiving the position signals outputted by the joystick, the controlling means being operative to assume two controlling states consisting of a first controlling state to control the driving operation of the camera unit, and a second controlling state to control the movement of the marker on the screen in response to the position signals to ensure that the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target; and setting means for having the signal controlling means selectively assume the first and second controlling states.

The surveillance system defined in amended claim 1 is completely different in construction from the disclosure of the cited document D1.

Further, the surveillance system defined in amended claim 1 can obtain the

advantages that the marker can be positioned on the screen in predetermined relationship with the object to be selected as the chasing target. The autotracking device disclosed in the cited document D1, however, cannot expect the advantages of the surveillance system defined in amended claim 1, resulting from the fact that the cited document D1 fails to disclose a surveillance system which comprises a camera unit for transforming an image indicative of the objects into an image signal and outputting the image signal; a display unit having a screen and operative to transform the image signal outputted by the camera unit into an image to be displayed on the screen, the display unit including marker displaying means for displaying a marker on the screen, and chasing target determining means for selecting as a chasing target one object from among the objects displayed on the screen by determining whether or not the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target; a joystick operative to be inclined at its desired angular positions to output position signals respectively responsive to the desired angular positions; signal controlling means for receiving the position signals outputted by the joystick, the controlling means being operative to assume two controlling states consisting of a first controlling state to control the driving operation of the camera unit, and a second controlling state to control the movement of the marker on the screen in response to the position signals to ensure that the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target; and setting means for having the signal controlling means selectively assume the first and second controlling states. As will be understood from the foregoing description that any one of the objects displayed on the screen can be easily determined as a chasing target by using a marker, the surveillance system defined in amended claim 1 is also completely different in advantages from the disclosure of the cited document D1.

The cited document D2 discloses a tracking system which comprises: a computer system, a pointing device connected to the computer system, providing a means of designating a person to be tracked, a means of digitizing an input camera video signal connected to the computer system, an interface means allowing a camera motion control signal to be input to the computer system, a camera multiplexing means allowing a particular set of camera video and motion control signals to be selected from a multiplicity

of the signals and passed through to appropriate input and output connections, an interface means allowing a selector signal and camera motion control signals to be output from the computer system to the camera multiplexing means; and a software program running on the computer implementing an algorithm providing a means of issuing camera motion control signals to the interface means and multiplexing means in such a manner as to keep the designated person to be tracked centered in the field of view of a pan/tilt/zoom camera.

The chasing target determining means of the display unit of the surveillance system defined in amended claim 1 selects as a chasing target one object from among the objects displayed on the screen by determining whether or not the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target, while the pointing device of the tracking system disclosed in the cited document D2 is connected to the computer system, and provides a means of designating a person to be tracked. In other words, the marker is not positioned on the screen in predetermined relationship with the object to be selected as a chasing target in the tracking system disclosed in the cited document D2 in the tracking system disclosed in the cited document D2. Accordingly, the judgment is not made on whether or not the marker is positioned on the screen in predetermined relationship with the object to be selected as a chasing target in the tracking system disclosed in the cited document D2.

The cited document D2 fails to disclose a surveillance system which comprises a camera unit for transforming an image indicative of the objects into an image signal and outputting the image signal; a display unit having a screen and operative to transform the image signal outputted by the camera unit into an image to be displayed on the screen, the display unit including marker displaying means for displaying a marker on the screen, and chasing target determining means for selecting as a chasing target one object from among the objects displayed on the screen by determining whether or not the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target; a joystick operative to be inclined at its desired angular positions to output position signals respectively responsive to the desired angular positions; signal controlling means for receiving the position signals outputted by the joystick, the controlling means being operative to assume two controlling states consisting of a first controlling state to control

the driving operation of the camera unit, and a second controlling state to control the movement of the marker on the screen in response to the position signals to ensure that the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target; and setting means for having the signal controlling means selectively assume the first and second controlling states.

The surveillance system defined in amended claim 1 is completely different in construction from the disclosure of the cited document D2.

Further, the surveillance system defined in amended claim 1 can obtain the advantages that the marker can be positioned on the screen in predetermined relationship with the object to be selected as the chasing target. The automated video person tracking system disclosed in the cited document D2, however, cannot expect the advantages of the surveillance system defined in amended claim 1, resulting from the fact that the cited document D2 fails to disclose a surveillance system which comprises a display unit including marker displaying means for displaying a marker on the screen, and chasing target determining means for selecting as a chasing target one object from among the objects displayed on the screen by determining whether or not the marker is displayed on the screen in predetermined relationship with the object to be selected as the chasing target. As will be understood from the foregoing description that any one of the objects displayed on the screen can be easily determined as a chasing target by using a marker, the surveillance system defined in amended claim 1 is also completely different in advantages from the disclosure of the cited document D2.

The cited document D3 discloses a target object following apparatus which comprises: imaging means having a focus and an iris, for picking up an image of an imaging area and supplying a video signal corresponding to data produced therefrom as picture data including a target object; imaging area changing means for changing the imaging area of the imaging means on a basis of a predetermined control signal; a picture data blocking circuit for dividing the picture data corresponding to the image of the imaging area which is sequentially input into blocks of a predetermined number of pixels in both a horizontal direction and a vertical direction, the picture data being supplied from the image means; an input circuit for setting a position of an area containing the target object in the picture data

according to an input by a user and supplying a position signal produced therefrom; a detection area setting circuit for setting a tracking vector detection area including a predetermined number of the blocks in the horizontal and the vertical directions according to the position signal; a motion detection circuit for detecting motion vectors for respective ones of the blocks in the tracking vector detection area and supplying the detected motion vectors produced therefrom; a tracking vector detection circuit for detecting a distribution of the detected motion vectors of the respective ones of the blocks in the tracking vector detection area and then detecting a tracking vector with a moving direction and a moving quantity of a portion of a picture in the tracking vector detection area on a basis of the distribution detection result; a detection area correction circuit for moving the tracking vector detection area in correlation with a motion of the target object in the picture data, the tracking vector detection area being moved on a basis of the tracking vector with the moving direction and the moving quantity detected by the tracking vector detection circuit; a window-frame data generation circuit for generating window-frame picture data of a window frame corresponding to the tracking vector detection area, and for supplying the predetermined control signal to the imaging area changing means; a picture composing circuit for superimposing the window frame represented by the window-frame picture data upon the video signal, and generating a composite video signal therefrom; display means for receiving the composite signal, and displaying a picture with the window frame superimposed; and control means for detecting a signal level of the video signal for the tracking vector detection area, and for supplying a second predetermined control signal to the imaging means and thereby controlling the focus and the iris of the image means on a basis of the detected signal level of the video signal.

The marker displaying means of the display unit of the surveillance system defined in amended claim 1 is operative to display a marker on the screen, while the display means of the target object following apparatus of the cited document D3 receives the composite signal, and displays a picture with the window frame superimposed.

The cited document D3 fails to disclose a surveillance system which comprises a camera unit for transforming an image indicative of the objects into an image signal and outputting the image signal; a display unit having a screen and operative to transform the

image signal outputted by the camera unit into an image to be displayed on the screen, the display unit including marker displaying means for displaying a marker on the screen, and chasing target determining means for selecting as a chasing target one object from among the objects displayed on the screen by determining whether or not the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target; a joystick operative to be inclined at its desired angular positions to output position signals respectively responsive to the desired angular positions; signal controlling means for receiving the position signals outputted by the joystick, the controlling means being operative to assume two controlling states consisting of a first controlling state to control the driving operation of the camera unit, and a second controlling state to control the movement of the marker on the screen in response to the position signals to ensure that the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target; and setting means for having the signal controlling means selectively assume the first and second controlling states.

The surveillance system defined in amended claim 1 is completely different in construction from the disclosure of the cited document D3.

Further, the surveillance system defined in amended claim 1 can obtain the advantages that the marker can be positioned on the screen in predetermined relationship with the object to be selected as the chasing target. The target object following apparatus disclosed in the cited document D3, however, cannot expect the advantages of the surveillance system defined in amended claim 1, resulting from the fact that the cited document D3 fails to disclose a surveillance system which comprises a display unit including marker displaying means for displaying a marker on the screen, and chasing target determining means for selecting as a chasing target one object from among the objects displayed on the screen by determining whether or not the marker is displayed on the screen in predetermined relationship with the object to be selected as the chasing target. As will be understood from the foregoing description that any one of the objects displayed on the screen can be easily determined as a chasing target by using a marker, the surveillance system defined in amended claim 1 is also completely different in advantages from the disclosure of the cited document D3.

The cited document D4 discloses a comprehensive multi-media security surveillance and safety system which comprises: at least one visual sensor adapted for monitoring a selected visual condition associated with the commercial transport for generating a unique visual data signal in IP protocol representing a specific visual condition to be monitored; at least one audio sensor adapted for monitoring a selected audio condition associated with the commercial transport for generating a unique audio data signal in IP protocol representing a specific audio condition to be monitored; at least one textual input device for generating a textual data signal; a wireless transmitter associated with each of the sensors and the textual input device and adapted for transmitting the respective data signals; a ground based monitoring station; and a wireless receiver associated with the ground based monitoring station for receiving the data signals.

The cited document D4 fails to disclose a surveillance system which comprises a camera unit for transforming an image indicative of the objects into an image signal and outputting the image signal; a display unit having a screen and operative to transform the image signal outputted by the camera unit into an image to be displayed on the screen, the display unit including marker displaying means for displaying a marker on the screen, and chasing target determining means for selecting as a chasing target one object from among the objects displayed on the screen by determining whether or not the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target; a joystick operative to be inclined at its desired angular positions to output position signals respectively responsive to the desired angular positions; signal controlling means for receiving the position signals outputted by the joystick, the controlling means being operative to assume two controlling states consisting of a first controlling state to control the driving operation of the camera unit, and a second controlling state to control the movement of the marker on the screen in response to the position signals to ensure that the marker is positioned on the screen in predetermined relationship with the object to be selected as the chasing target; and setting means for having the signal controlling means selectively assume the first and second controlling states.

The surveillance system defined in amended claim 1 is completely different in construction from the disclosure of the cited document D4.

Further, the surveillance system defined in amended claim 1 can obtain the advantages that the marker can be positioned on the screen in predetermined relationship with the object to be selected as the chasing target. The comprehensive multi-media security surveillance and safety system disclosed in the cited document D4, however, cannot expect the advantages of the surveillance system defined in amended claim 1, resulting from the fact that the cited document D4 fails to disclose a surveillance system which comprises a display unit including marker displaying means for displaying a marker on the screen, and chasing target determining means for selecting as a chasing target one object from among the objects displayed on the screen by determining whether or not the marker is displayed on the screen in predetermined relationship with the object to be selected as the chasing target. As will be understood from the foregoing description that any one of the objects displayed on the screen can be easily determined as a chasing target by using a marker, the surveillance system defined in amended claim 1 is also completely different in advantages from the disclosure of the cited document D4.

It will, therefore, be appreciated from the foregoing description that the surveillance system defined in amended claim 1 is patentably distinguishable over the disclosure of each of the cited documents D1, D2, D3, and D4.

Claims 2 and 5 to 7 are dependent on the amended claim 1 which is believed to be patentably distinguishable over the disclosure of each of the cited documents as will be understood from the previously mentioned reasons. Claim 4 is dependent on the amended claim 2 which is believed to be patentably distinguishable over the disclosure of each of the cited documents as will be understood from the previously mentioned reasons. Claims 8 is dependent on the claim 5 which is believed to be patentably distinguishable over the disclosure of each of the cited documents as will be understood from the previously mentioned reasons. It is, therefore, believed that claims 2 and 4 to 8 are patentably distinguishable over the disclosure of the cited reference based on the same reason as above.

In view of the foregoing description, it is respectfully submitted that the present application is thus in condition for allowance.

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If any fees are required by this communication which are not covered by an enclosed check, please charge such fees to our Deposit Account No. 16-0820, Order No. 33718.

Respectfully submitted,

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